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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Advanced Television Systems	)	MM Docket No. 87-268
and Their Impact Upon the	)	
Existing Television Broadcast	)	
Service	)	

To: The Commission

PETITION FOR PARTIAL RECONSIDERATION
OF COSMOS BROADCASTING CORPORATION

Cosmos Broadcasting Corporation ("Cosmos"), licensee of eight television stations located throughout the eastern United States, by its counsel, hereby petitions the Commission to reconsider certain aspects of its *Memorandum Opinion and Order on Reconsideration of the Fifth Report and Order* ("*Service Rules MO&O*") and *Sixth Report and Order* ("*DTV Allotment MO&O*") (collectively, the "*MO&Os*") in the above-captioned proceeding. Cosmos continues to support the Commission's goal of rapid implementation of digital television to bring this new television service to the American public. Cosmos understands that all broadcasters have a role in bearing some of the burdens associated with the roll-out of DTV, and it does not seek to entangle the Commission in resolving every dilemma faced by licensees, especially in those cases where broadcasters — embracing free market principles — can resolve matters through mutual agreement. Indeed, Cosmos is in the process of reaching voluntary, inter-community agreements of the type advanced by the Commission as a means to improve and facilitate the DTV transition. Nonetheless, some problems can be addressed only by the Commission in its role as guardian of the airwaves. Tackling difficult problems now will ensure a smoother

transition to digital broadcasting and increase the likelihood of success for the new service. To that end, Cosmos is seeking reconsideration of the Commission's accounting of field strengths for those broadcasters choosing to employ beam tilting and the DTV allotments for two stations.

I. ADDITIONAL MEASURES ARE NECESSARY TO PROTECT AGAINST INTERFERENCE CAUSED BY BEAM TILTING.

A. The Gain Value in Section 73.622(f)(4)(ii) Must Be Increased.

In the *DTV Allotment MO&O*, the Commission adopted ALTV's proposal to permit broadcasters to employ beam tilting techniques, subject to certain conditions.[1/] Cosmos had objected to the use of beam tilting if such use would create new interference.[2/] Though beneficial in some instances, beam tilting is not suited for universal application. In crowded spectrum markets such as will exist during the DTV transition period, the combined effect of tower deflection, high gain antennas and beam tilting could create significant new interference for existing DTV allotments.[3/] The Commission, in response, *inter alia*, to the concerns expressed by Cosmos, took several measures in an attempt to ensure that unacceptable interference would not result from beam tilting. One such measure, set forth in Section 73.622(f)(4)(ii) of the Commission's rules, requires beam tilters to tack on 1 dB of additional

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1/ *DTV Allotment MO&O* at ¶82. *See* 47 C.F.R. § 73.622(f)(4).

2/ *See Cosmos Response to* Ex Parte *Filings Addressing Digital TV Allotments* (filed Dec. 17, 1997).

3/ *Id.* Copy of the Technical Statement that accompanied those comments is attached (Attachment A).

antenna gain over that specified by the antenna manufacturer when determining their permissible field strengths at the edge of the station's service contour.[4/]

Cosmos seeks reconsideration of the beam tilting rules to the extent that the Commission increase the 1 dB value adopted in Section 73.622(f)(4)(ii) and adopt adequate protection for neighboring stations. In its prior filing, Cosmos demonstrated that beam tilting could increase the effective ERP at the radio horizon by 11 dB.[5/] The Commission's 1 dB protection is simply inadequate to address this amount of interference and it should, instead, adopt an additional gain of 11 dB for the purposes of Section 73.622(f)(4)(ii).[6/] If future experience demonstrates that lower gain values would still protect stations from unacceptable interference, then the Commission should adjust its rules accordingly. Until such time, the Commission should rely on existing data and prescribe an 11 dB additional gain for calculating field strengths at the edge of service areas.

B. Beam Tilters Must Notify *All* Potentially Affected Stations.

The Commission also should modify the notification requirements applicable to beam tilters. Section 73.622(f)(4)(iv) requires that broadcasters who propose beam tilting notify "all stations that could potentially be affected by such operation."[7/] The rule goes on to specify that

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4/ 47 C.F.R. § 73.622(f)(4)(ii).

5/ *See* Attachment A.

6/ *See* attached Technical Statement (Attachment B) of du Treil, Lundin & Rackley, Inc.

7/ 47 C.F.R. § 73.622(f)(4)(iv).

the list of such potentially affected stations at least include those located at distances less than the minimum geographic spacing requirements of Section 73.623(d)(2).[8/]

Cosmos urges the Commission to increase the distances triggering the notification requirements adopted in Section 73.622(f)(4)(iv). As both the Commission and broadcasters are well aware, DTV interference can extend well beyond those specified distances, and that would only be aggravated by the use of beam tilting. For administrative ease, rather than adopting another new table for these purposes, Cosmos recommends that broadcasters double amounts in each category designated in Section 73.623(d)(2) in determining which stations would be notified by beam tilters. At little cost, this would increase the likelihood that all potentially affected broadcasters would indeed be notified.

In the alternative, at the very least, the Commission should clarify that stations falling within Section 73.623(d)(2)'s listed distances are not intended to be the only stations notified of beam tilting activity. As the rule clearly states, potentially affected stations "*include*" those designated by Section 73.623(d)(2), but "*all*" potentially affected stations must be notified.[9/]

II. THE COMMISSION SHOULD RECONSIDER THE ALLOTMENT FOR WFIE(DT), EVANSVILLE, INDIANA.

WFIE(TV) operates on NTSC Channel 14 and was allotted DTV Channel 58. Cosmos sought reassignment of this allotment in the reconsideration stage, but the Commission rejected the request, maintaining that its own analysis demonstrated that the level of replication on

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8/ *Id.*

9/ *Id.* (emphasis added).

Channel 58 was adequate.[10/] Furthermore, the Commission stated, the proposed reassignment to Channel 46 would create new unacceptable levels of interference to other stations.[11/]

Cosmos asks that the Commission again reconsider WFIE's DTV allotment. The engineering analysis completed by Cosmos shows that the interference caused by the proposed DTV reallotment to Channel 46 would not be unacceptable.[12/] The proposed reallotment would result in negligible interference to three stations (none of which are short spaced to WFIE): 0.2% of the population within the service area of WDCN-DT, Nashville, TN; less than 0.01% of the service population of WHSL-TV, East St. Louis, IL; and less than 0.01% of the service population of WTHR-DT, Indianapolis, IN.[13/] The three NTSC allotments to which the proposed reallotment would be short-spaced are vacant and apparently unviable. Neither the Channel 46 commercial NTSC allotment in Paris, IL or the Channel 61 commercial NTSC allotment at Owensboro, KY has any pending construction permits — they will be deleted.[14/] Another potentially affected allotment, NTSC Channel 48, Owensboro, KY, has ungranted construction permits pending, but based upon the Commission's severely short-spaced DTV allotment to Bowling Green, KY, those applicants appear not to have been accommodated.[15/]

10/ *DTV Allotment MO&O* at ¶482.

11/ *Id.*

12/ *See* attached Technical Statement (Attachment C) of du Treil, Lundin & Rackley, Inc.

13/ *Id.*

14/ *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, Sixth Report and Order, 12 FCC Rcd 14588, 14639 (1997) ("*Sixth Report and Order*").

15/ *See* Attachment C.

The benefits of granting the reallotment far outweigh any negative impact. If WFIE(DT)'s request is denied, the station would face adjacent DTV channel problems with WEHT-DT, Evansville, IN.[16/] The Commission acknowledged the significance of adjacent channel problems in the *DTV Allotment MO&O*, with the severity identified only after the time petitions were filed in the initial round of reconsideration of the *Sixth Report & Order*.[17/] In the *DTV Allotment MO&O*, the Commission took a multifaceted approach in addressing the DTV adjacent channel problem, stating its belief that the best solution included:

> tightening the emissions mask, allowing flexibility in our licensing process and for modification of individual allotments in the DTV Table to encourage adjacent channel co-locations, and continued monitoring of this situation.[18/]

Illustrating the seriousness of the matter, the Commission modified 42 DTV allotments to resolve adjacent DTV channel problems.[19/]

As with those 42 modified DTV allotments, the balance of interests requires that the Commission grant WFIE(DT)'s requested reallotment to Channel 46. WFIE(DT)'s adjacent channel problem could be more reasonably tolerated if no viable solution existed, but this is not the case. Waiting until Cosmos has purchased dedicated equipment for its current DTV allotment and commenced operations to prove the existence of an already identified problem would result in unnecessary and sizable expense and delay, hindering the rapid roll-out of DTV service. Furthermore, the grant of the proposal would eliminate the use of the out-of-core

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16/ WEHT-DT was allotted Channel 59. *See DTV Allotment MO&O,* Appendix B.

17/ *DTV Allotment MO&O* at ¶¶88-92.

18/ *Id.* at ¶95.

19/ *Id.*

allotment of Channel 58 (and save relatively expensive relocation costs for the small market station). The Commission should afford WFIE(DT) the flexibility promised throughout the proceedings and grant the reallotment to Channel 46 to avoid the adjacent channel problems of the type identified by the Commission.[20/]

III. THE COMMISSION SHOULD CONSIDER REQUESTS FOR PAIRED DTV ALLOTMENTS BY NEW PERMITTEES AND APPLICANTS ON A CASE-BY-CASE BASIS.

Cosmos is the surviving applicant for a new NTSC station in Myrtle Beach, SC.[21/] Subsequent to the submission of its Settlement Agreement, Cosmos filed a request for waiver requesting the paired DTV allotment of Channel 14 for the Myrtle Beach, SC station.[22/] In the *Service Rules MO&O*, the Commission declined again to grant new permittees (as Cosmos would be upon approval and grant) a paired DTV license.[23/] Application of the Commission's stated policy for new permittees would preclude the assignment of the paired DTV allotment for the new Myrtle Beach station. Cosmos seeks reconsideration of this policy and requests that the

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20/ "Throughout this proceeding," the Commission said, "we have stated that we intend to provide broadcasters with the flexibility to develop alternative allotment approaches." *Id.* at ¶187.

21/ *See Settlement Agreement of Cosmos Broadcasting Corporation re New TV Station in Myrtle Beach, SC* (filed January 30, 1998) (referencing FCC File No. BPCT-960920WV).

22/ *See Amendment to Construction Permit/Waiver Request by Cosmos Broadcasting Corporation* (filed Feb. 4, 1998) (referencing FCC File No. BPCT-960920WV).

23/ *Service Rules MO&O* at ¶¶10-16. Specifically, NTSC TV station applicants with permits granted after April 3, 1997 are not eligible for paired DTV licenses. *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, Fifth Report and Order, 12 FCC Rcd 12809, 12816a (1997) ("*Fifth Report and Order*").

Commission entertain showings by permittees and applicants, on a case-by-case basis, that paired DTV allotments are warranted.

Congress did not preclude a procedural case-by-case approach. The Telecommunications Act of 1996 required the Commission to limit "*initial* eligibility" for DTV licenses to existing licensees and permittees.[24/] This it has done, and a year has passed since the Commission released the DTV Table of Allotments and issued those initial licenses.[25/] Accordingly, the Commission is no longer prevented from entertaining case-by-case requests by new permittees and applicants for a paired DTV channel.[26/]

Giving new stations one channel will often times prove inadequate. The situation in Myrtle Beach is noteworthy. Through the new station, Cosmos would be providing the second over-the-air television service to a growing community. Though no one can forecast the public's response to DTV during the transition, a likely scenario is that one sizable group will embrace digital receivers and another sizable group will hold on to their analog sets. The merits of a dual analog/digital broadcasting approach during the transition period have obviously been embraced by the Commission. During the transition, stations limited to broadcasting in either analog or digital will likely be cut off from a generous portion of their audience. This should not be taken lightly, as the tornados in downtown Nashville, TN last week demonstrate. Despite serious and

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24/ 47 U.S.C. § 336(a)(1) (emphasis added).

25/ *Fifth Report and Order*, 12 FCC Rcd at 12838.

26/ Cosmos understands that future digital television services could be subject to competitive bidding, but that the topic is under consideration in separate proceedings. *See Implementation of Section 309(j) -- Competitive Bidding for Commercial Broadcast and Instructional Television Fixed Service Licenses*, Notice of Proposed Rule Making, MM Docket No. 97-234, FCC 97-397 (1997) at ¶6.

costly damages, the city experienced no fatalities — due in large part to the emergency alerts provided by local television broadcasters (as acknowledged by local authorities). Hurricane- and storm-prone cities such as Myrtle Beach deserve more than the piecemeal coverage that would be provided by unpaired service throughout the DTV transition period.

This example only serves to illustrate that this bright-line restriction, though easy to administer, inherently precludes the Commission from engaging in its important role as protector of the public interest and regulator of the airwaves. If public interest requirements have any meaning, they must be predicated on the necessity of broadcasting to the public. Cosmos urges the Commission to reconsider its policy on paired DTV allotments for new permittees and applicants and adopt a case-by-case review of such requests. In any event, Cosmos asks the Commission to review its request for a paired DTV allotment for the new station in Myrtle Beach, SC on such a basis.

CONCLUSION

For the foregoing reasons, Cosmos requests partial reconsideration of the stated elements of the *MO&Os*.

Respectfully submitted,

COSMOS BROADCASTING CORPORATION

By: Scott S. Patrick

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202-776-2000

Dated: April 20, 1998

ATTACHMENT A

Copy of Technical Statement

from response to *Ex Parte* filings

(submitted Dec. 17, 1997)

TECHNICAL EXHIBIT
COSMOS BROADCASTING CORPORATION
DTV BEAM TILT PROPOSAL

Technical Statement

This technical exhibit was prepared on behalf of Cosmos Broadcasting Corporation (herein "Cosmos"), licensee of several full-service television stations. Cosmos is responding to the Association of Local Television Stations (ALTV) proposal to increase the effective radiated power of all DTV television stations to 1,000 kilowatts without increasing the coverage area beyond their present respective noise-limited contour. The suggested mechanism to provide such an increase in effective radiated power is to employ beam tilt of the transmitting antenna. This could theoretically limit the field strengths at the original noise-limited contour value but increase the field strengths within the contour. This is achieved by tilting the main beam of the DTV transmitting antenna vertical plane within the noise-limited contour area rather than toward the radio horizon as is typical for full-service television stations.

Cosmos is concerned about the use of excessive transmitting antenna beam tilt to achieve an effective radiated power of 1,000 kilowatts while restricting power toward the radio horizon. Principally, Cosmos does not believe that a specific beam tilt can be maintained due to the dynamic characteristic of towers. With such effects as

wind loading on transmitting antenna towers, tower deflections occur which will cause deviations in the antenna beam tilt. This shift in the antenna beam tilt will alter the power radiated toward the radio horizon. If the effective radiated power is increased by beam tilt shift, interference to other stations may occur, thus resulting is loss of service. It is also important to note that increases in beam tilt required by the ALTV proposal are typically beyond the values traditionally used by today's NTSC stations.

According to a representative from Kline Towers, a manufacturer and erector of tall towers, maximum tower deflections occur up to 1.3 percent of the tower height at maximum design wind loading. A memo from Kline Towers establishing this tower deflection value is shown on Figure 1. The memo further states that if a tower with an overall height of 2,000 feet above ground level is subjected to maximum wind loading, the top of the tower is expected to deflect up to 25 feet. Further calculations by the undersigned reveal that this will cause a shift in the beam tilt of up to 0.7° from the established value. It is noted that the beam tilt caused by tower deflections is independent of tower height.

To determine the change in effective radiated power caused by beam tilt shift from tower deflections, a review is necessary of the vertical plane pattern of a high gain antenna as shown on Figure 2. A high gain antenna, such as the Dielectric 42J3600 noted on Figure 2, would most likely be employed by a DTV station to achieve an effective radiated power of 1,000 kilowatts with 50 kilowatts radiated toward the radio horizon. Assuming that the main beam of the vertical pattern has an effective radiated power of

1,000 kilowatts (Point A), the antenna would have to be tilted 1.3° (Point B) to radiate 50 kilowatts toward the radio horizon. If tower deflections cause a 0.7° shift in the beam tilt, than the power radiated toward the radio horizon either increases to 625 kilowatts (Point C) or decreases to 38 kilowatts (Point D). This 11-decibel increase in effective radiated power at the radio horizon caused by the 0.7° beam tilt shift could cause new or increased interference to other broadcast stations.

A shift in the transmitting antenna beam tilt will also cause a change in the power radiated toward the radio horizon for a low gain transmitting antenna. Figure 3 is similar vertical plane pattern for a Dielectric 24J2250 antenna. Such an antenna may be employed to achieve an effective radiated power of 250 kilowatts within the noise-limited contour with 50 kilowatts radiated toward the radio horizon. A 0.7° beam tilt shift will cause the power radiated toward the radio horizon to increase to 150 kilowatts or decrease to 0.8 kilowatt. If the power is increased at the radio horizon, new or increased interference could occur to other stations, but not to the extent as the aforementioned high gain antenna.

Substantial interference can also occur if the tower deflection is only one-half of the 1.3 percent maximum winding loading or 0.35° beam tilt. As can be derived from the antenna vertical patterns shown in Figures 2 and 3, 0.35° of additional tilt could cause a 7 decibel increase in effective radiated power toward the radio horizon for the high gain antenna (Figure 2) and 2.5 decibel increase for the low gain antenna (Figure 3).

To illustrate the interference increase which may occur with tower deflections, an interference study to an existing NTSC station was calculated pursuant to OET Bulletin 69. According to both the FCC's and proposed MSTV's DTV allotment table, television station WETA-TV at Washington, DC is assigned DTV channel 27. This DTV facility is predicted to cause interference to the existing WHTM-TV on NTSC Channel 27 at Harrisburg, Pennsylvania over an area of 506 km^2 encompassing a population of 39,060 persons as shown on Figure 4. Figure 5 shows the predicted interference to WHTM-TV if WETA-TV is assumed to be operating at 1,000 kilowatts using the ALTV's beam tilt concept with maximum tower deflection (0.7° of additional beam tilt). It is assumed that the WETA-TV tower is deflecting in such a way as to increase the effective radiated power toward the radio horizon using the transmitting antenna specified in Figure 2. The predicted interference to WHTM-TV from this assumed WETA-TV facility will increase to an area of 1,045 km^2 with a population of 72,225 persons. This is an increase in interference to WHTM-TV of 206 percent in the area and 184 percent of the population.

If WETA-TV is assumed to operate at a an effective radiated power of 250 kilowatts employing the antenna described in Figure 3, additional interference caused by maximum tower deflections will also continue to occur to WHTM-TV. Calculations indicate that the interference area will increase to 732 km^2 containing a population of 52,210 persons. This is an increase in interference to WHTM-TV of 145 of the area and 133 percent of the population.

The increase in the effective radiated power to 1,000 kilowatts to all DTV stations will also increase the

blanket area. A blanket area, according to Section 73.685(d) of the Commission's Rules, is that area adjacent to a transmitter in which the reception of other stations is subject to interference due to the strong signal from this station. The size of the area is related to the effective radiated power of the station. Therefore, with all stations operating at higher power levels, the problems associated with blanket interference will also increase.

Use of Measurements to Establish Interference

Cosmos has further concerns regarding the determination of new or additional interference caused by increases in the effective radiated power by the use of beam tilt. As the field strengths at the noise-limited contour theoretically are not increased by the use of beam tilt, interference within the noise-limited contour can still be caused to other television stations. ALTV proposes to resolve these interference issues by determining if "incremental visible interference occurs."[1] ALTV is further concerned with the raising of the "total digital noise floor" in a television market. However, no explanation is provided as to why the digital noise floor would be increased. Therefore, Cosmos lacks the necessary information to comment on this noise floor concept.[2]

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[1] ALTV defines incremental visible interference as the level of interference above and beyond that which would have existed had the station been operating at the assigned effective power contained in the FCC's final Report and Order.

[2] It is assumed that the frequency "splatter" products occurring throughout the UHF band from all the high power DTV stations would increase the total noise floor.

According to ALTV, any incremental visible interference would be established by measurements. As the Commission realizes, in order for measurements to have statistical relevance, extensive measurements have to be taken. Furthermore, the analysis of such measurements is subjective, thus permitting the possibility of different conclusions. Therefore, the use of measurements in the determination of "incremental visible interference" would be an impractical process.

It can be concluded that tower deflections will cause a shift in the beam tilt of the DTV transmitting antenna. This shift, independent of the overall tower height, may cause an increase in effective radiated power at the radio horizon and consequently cause new or increased interference to other broadcast stations. Additionally, the use of field strength measurements to establish any new interference which may result by the use of beam tilt is impractical. Therefore, Cosmos does not believe that a specific beam tilt can be maintained and therefore the ALTV proposal will result in loss of service to other stations.

Charles A. Cooper

December 5, 1997

du Treil, Lundin & Rackley, Inc.
240 North Washington Blvd., Suite 700
Sarasota, Florida 34236
941.366.2611

Figure 1

CONSULTING ENGINEERS SINCE 1941
DECEMBER 1997

KLINE TOWER

1225-35 Hagar St.
PO Box 1013
Columbia, SC 29202
PHONE: (803) 251-8000
FAX: (803) 251-8099

TO: STEVE SMITH
COSMOS BCSTG.
864/609.4420

DATE: DEC. 2, 1997

FROM: Ray White, Vice President
fax: (803) 251-8099 phone: (803) 251-6202

REF: TOWER DEFLECTION

KLINE CONTRACT #:

MESSAGE:

RECEIVED YOUR MESSAGE LATE TODAY.

TOWER DEFLECTIONS TEND TO RANGE BETWEEN 1% TO 1.3% OF TOWER HEIGHT BASED UPON "NORMAL" LOADING AND GUYING CONDITIONS. THEREFORE, A 2000' TOWER MAY BE EXPECTED TO DEFLECT 20' TO 25' AT ITS TOP, AND A 1000' TOWER FROM 10' TO 12', AT MAXIMUM DESIGN WIND LOADING. OPERATIONAL WIND SPEEDS WOULD PRODUCE MUCH LOWER DEFLECTIONS.

SHOULD YOU HAVE QUESTIONS, PLEASE CALL.

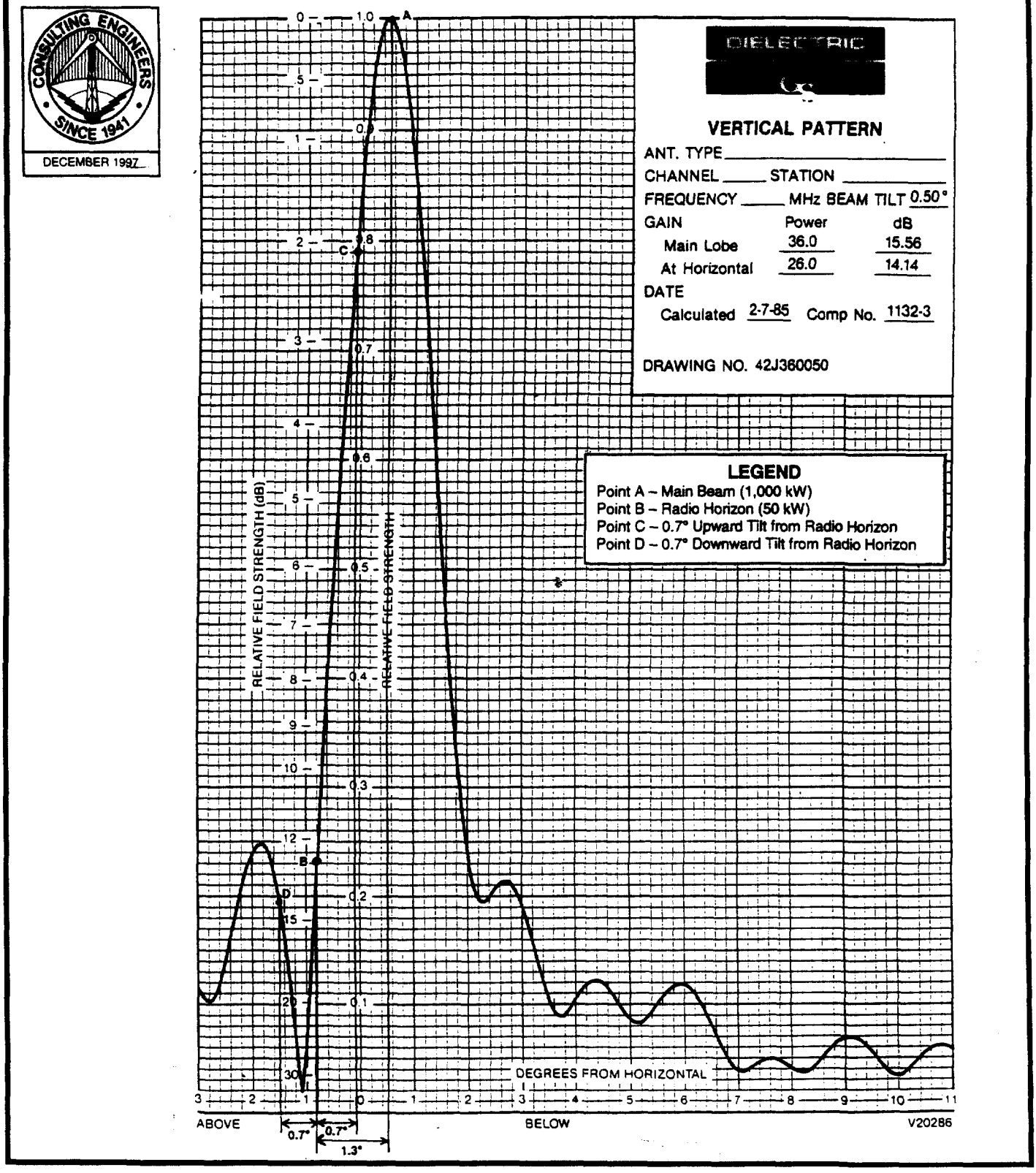
NUMBER OF PAGES INCLUDING THIS SHEET: ONE

MEMO FROM KLINE TOWERS

COSMOS BROADCASTING CORPORATION

DTV BEAM TILT PROPOSAL

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



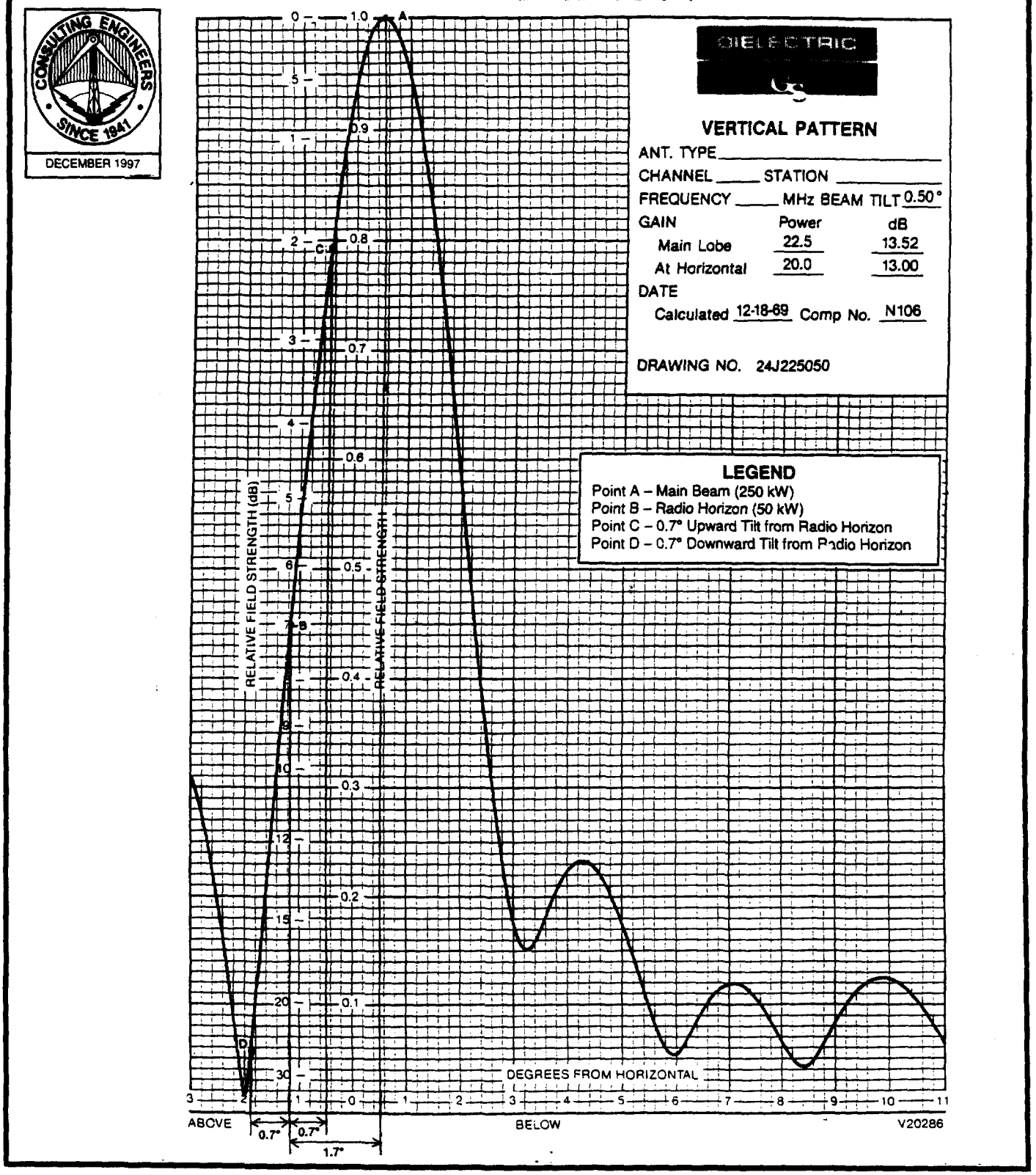
HIGH GAIN TRANSMITTING ANTENNA

VERTICAL PLANE PATTERN

COSMOS BROADCASTING CORPORATION

DTV BEAM TILT PROPOSAL

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



LOW GAIN TRANSMITTING ANTENNA

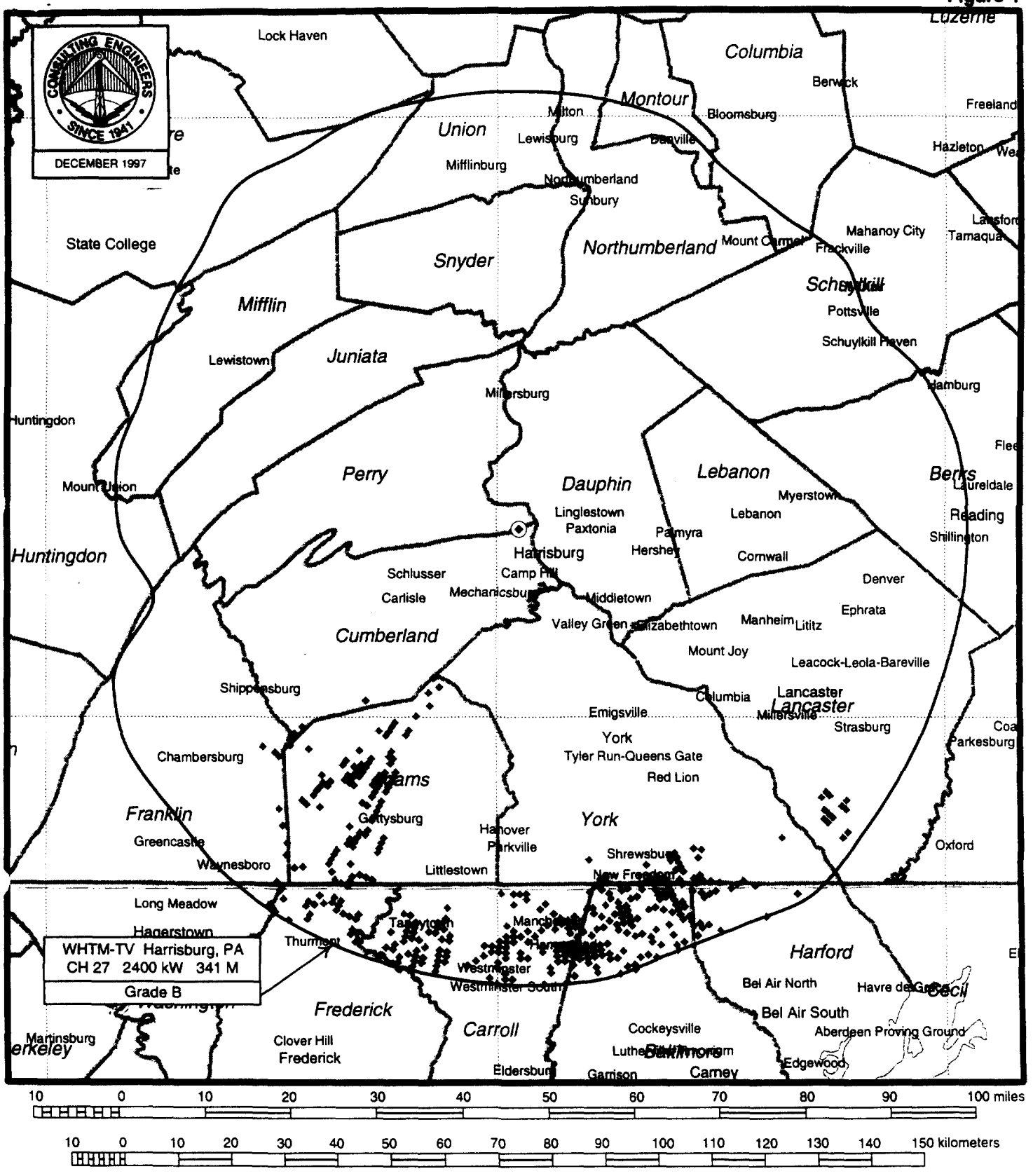
VERTICAL PLANE PATTERN

COSMOS BROADCASTING CORPORATION

DTV BEAM TILT PROPOSAL

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 4

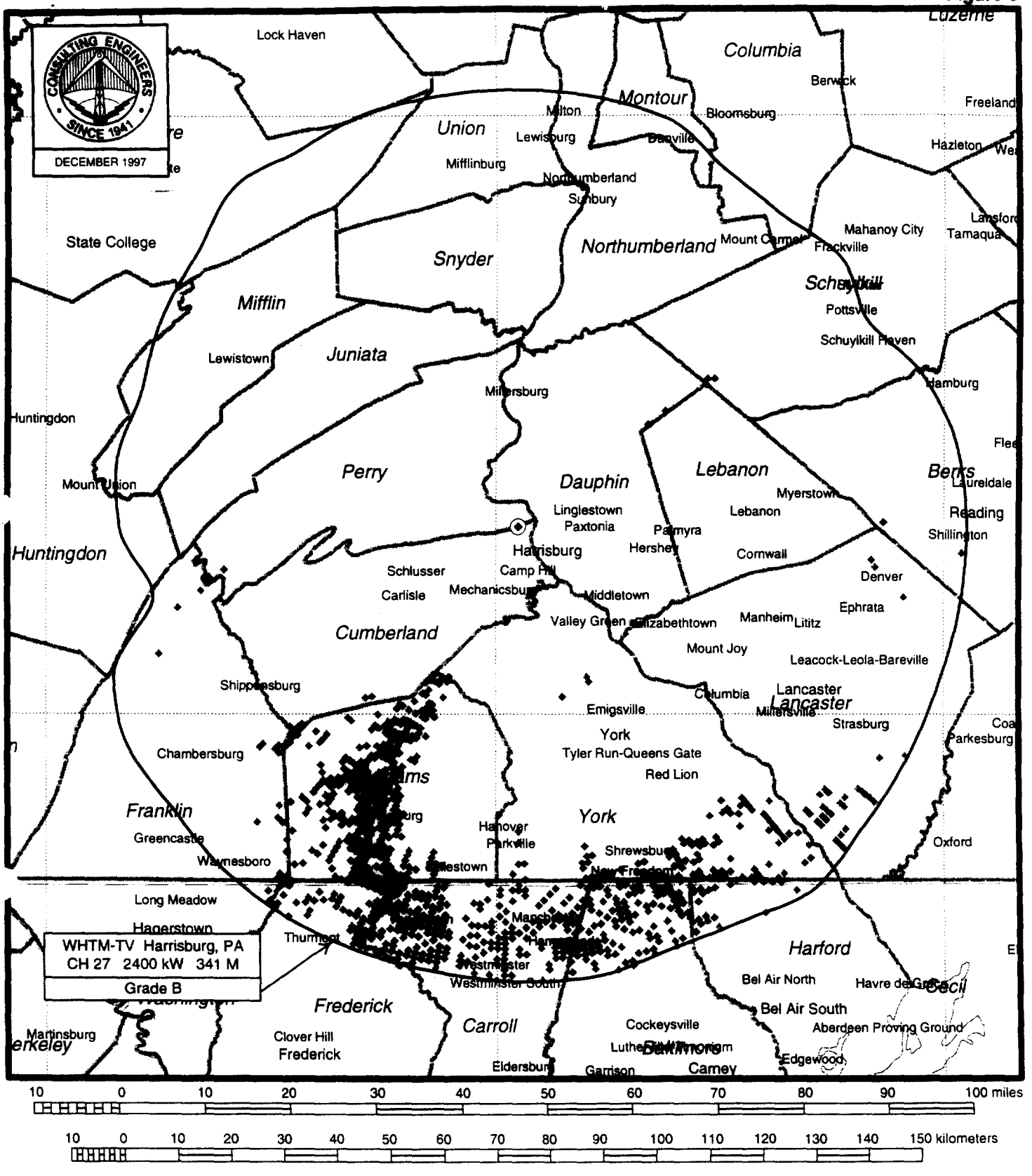


WHTM-TV INTERFERENCE FROM WETA DTV 27 WASHINGTON, DC 65.1 KW

COSMOS BROACASTING CORPORATION
DTV BEAM TILT PROPOSAL

du Treil, Lundin & Rackley, Inc., Sarasota, Florida

Figure 5



WHTM-TV INTERFERENCE FROM WETA DTV 27 WASHINGTON, DC 820 KW

COSMOS BROADCASTING CORPORATION DTV BEAM TILT PROPOSAL

du Treil, Lundin & Rackley, Inc., Sarasota, Florida

ATTACHMENT B

Technical Statement

Beam Tilt Protection

du Treil, Lundin & Rackley, Inc.

TECHNICAL STATEMENT
COSMOS BROADCASTING CORPORATION
DTV BEAM TILT PROPOSAL

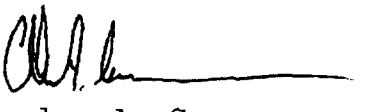
This technical statement was prepared on behalf of Cosmos Broadcasting Corporation (herein "Cosmos"), licensee of several full-service broadcast television stations. Cosmos is requesting reconsideration of the Federal Communications Commission's new rules to increase the effective radiated power within a UHF DTV station's service area through the use of antenna beam tilting. See Section 73.622(f)(4). Under the new rules, a UHF DTV station may request an increase in effective radiated power, up to 1,000 kilowatts, while maintaining the authorized field strength at the edge of the service contour. However, the field strengths at the edge of its service contour are to be calculated assuming one-decibel of additional antenna gain over the antenna gain specified by the manufacturer.

While Cosmos recognizes that the one-decibel of additional antenna gain would decrease the impact of interference to other stations due to tower deflections, it is not enough. As provided by example in the initial Technical Exhibit concerning this subject, an eleven-decibel increase in effective radiated power at the radio horizon could be caused by tower deflections.* Using the new one-decibel of additional antenna gain rule, the possible increase in effective radiated power at the radio horizon by this example would only decrease to ten-decibels. Cosmos believes that the new one-decibel of additional antenna gain rule is only a marginal improvement

* See Cosmos Broadcasting Corporation DTV Beam Tilt Proposal Technical Exhibit, dated December 5, 1997.

and will not be sufficient in providing protection to other broadcast stations.

Cosmos is also concerned that the notification of stations possibly affected by beam tilting is not sufficient. Under the new rules, the Commission will require notification of potentially affected stations only if the minimum geographic spacing requirements in Section 73.623(d)(2) of the Rules are not satisfied to those stations. However, as the Commission is aware, these minimum distance separations are not based on interference free service. Therefore, Cosmos believes that the Commission should require notification of affected stations based on greater geographic spacing requirements.



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April 15, 1998